

---

## THE EVALUATED GAMMA-RAY ACTIVATION FILE (EGAF)

Richard B. Firestone

*Lawrence Berkeley National Laboratory*

---

The Evaluated Gamma-ray Activation File (EGAF), a new database of prompt and delayed neutron capture gamma ray cross sections, has been prepared as part of an International Atomic Energy Agency (IAEA) Coordinated Research Project to develop a "Database of Prompt Gamma-rays from Slow Neutron Capture for Elemental Analysis". Recent elemental gamma ray cross-section measurements performed with the guided neutron beam at the Budapest Reactor have been combined with data from the literature to produce the EGAF database. EGAF contains thermal cross sections for  $\sim 35,000$  prompt and delayed gamma rays from 262 isotopes. New precise total thermal radiative cross sections have been derived for many isotopes from the primary and secondary gamma-ray cross sections and additional level scheme data. An IAEA TECDOC describing the EGAF evaluation and tabulating the most prominent gamma rays will be published in 2004. The TECDOC will include a CD-ROM containing the EGAF database in both ENSDF and tabular formats with an interactive viewer for searching and displaying the data. The Isotopes Project, Lawrence Berkeley National Laboratory continues to maintain and update the EGAF file. These data are available on the Internet from both the IAEA, National Nuclear Data Center, and Isotopes Project websites.